June 18, 1963 M. K. AVEDISSIAN 3,094,119

MASSAGING APPARATUS

Filed Aug. 1, 1960 3 Sheets-Sheet 1

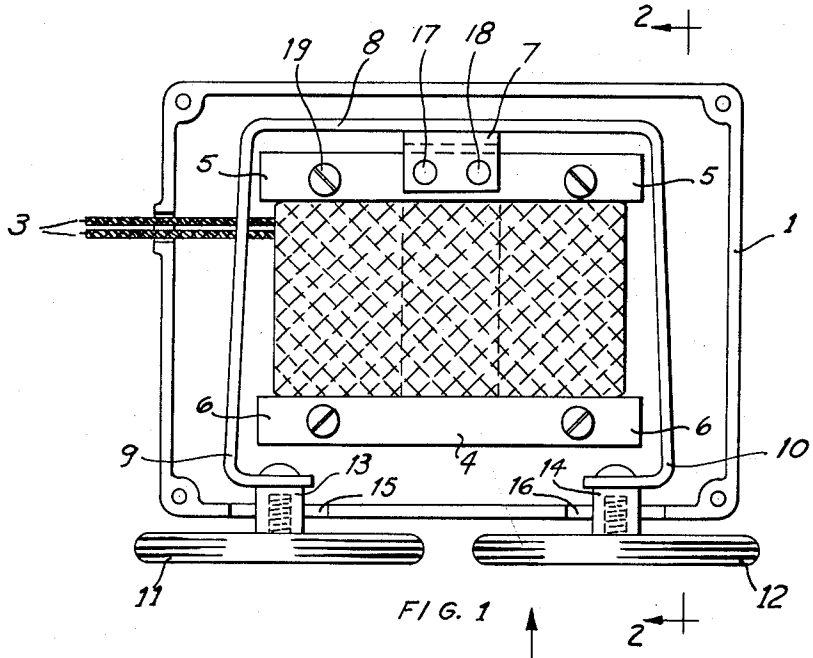


FIG. 1

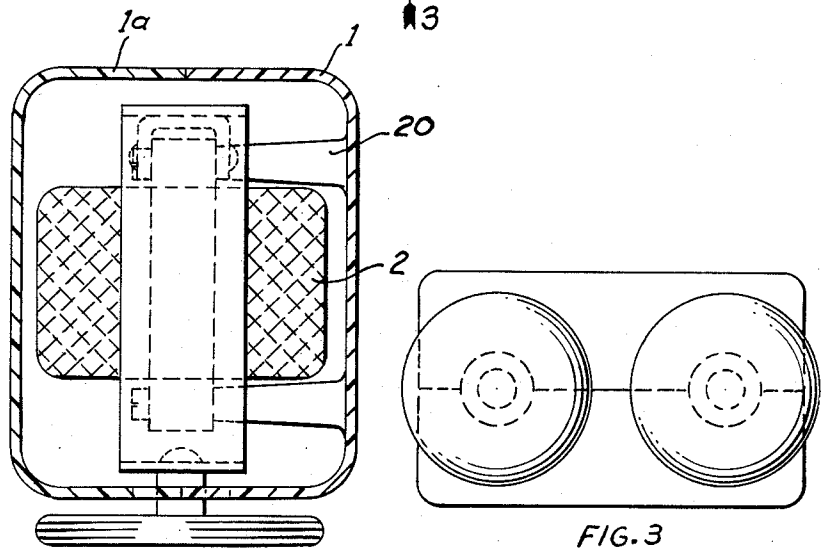


FIG. 2

FIG. 3

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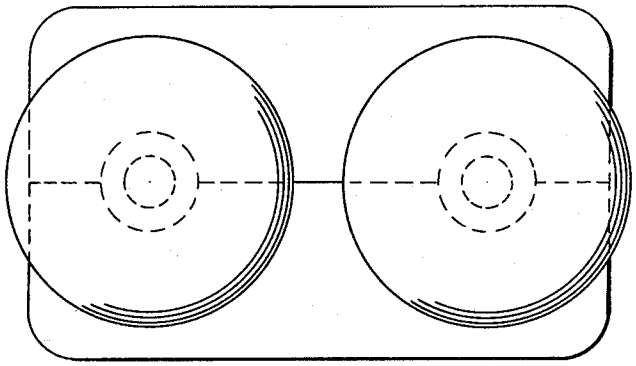


FIG. 3

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FIG. 4

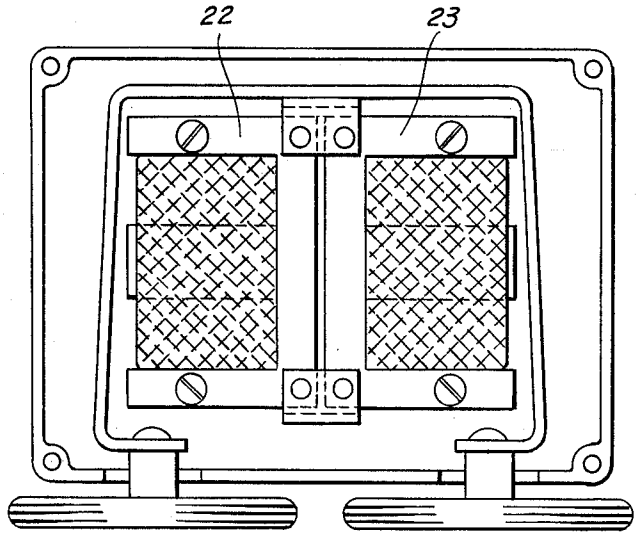
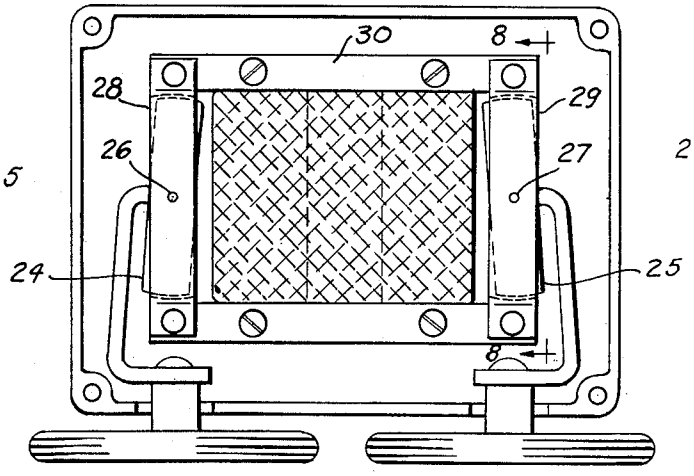


FIG. 5



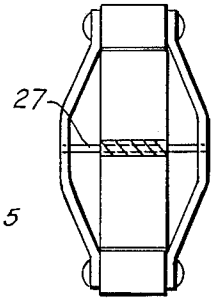


FIG. 6

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United States Patent Office 3,094,119 Patented June 18, 1963

3,094,119

MASSAGING APPARATUS

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Filed Aug. 1, 1960, Ser. No. 46,719
3 Claims. (Cl. 128—41)

This invention relates to a massage device or apparatus, and more particularly concerns a device of this type which simulates the hand massage actions advocated by the experts in this field as resulting in the most effective massage treatments.

One object of my invention is to provide a novel device of the type indicated.

Another object is to provide such a device having certain structural and functional features of advantage over the similar devices of the prior art.

A further object is to provide such a device which, in comparison with the similar prior art devices, is more simple in construction and more efficient and effective in its operation.

An additional object is to provide such a device which can be produced and operated at a substantially minimum cost.

Another object is to provide such as device which, from a practical and commercial standpoint, is far superior to the similar prior art devices in that it is free of certain objectionable or undesirable characteristics of the latter, such for example, as bulkiness, heaviness, hammering action, transmission of vibrations to the hand of the device user, embodiment of special or complicated mechanical or electrical components, etc.

It is also an object to provide such a device which embodies an even number of vibrating units or applicators in a certain novel relationship that establishes a balanced order therebetween which, by itself and in conjunction with other novel features of my invention achieves highly desirable results, such as effective massaging action without the transmission of any appreciable vibrations to the hand of the massage device holder, a periodic or cyclic increase and decrease of the massaging pressure at the areas subjected to treatment, a certain stretching and contracting action of the tissues at the treated areas etc.

Another object is to provide such a device which comprises the combination with electromagnetic impulse generating means of one or more similar pairs of armatures each of which armatures has a massage element joined therewith, and reciprocable means for maintaining each pair of armatures in such spaced positional relationship with the electromagnetic impulse generating means that the magnetic impulses generated by the latter will cause each pair of armatures to move toward and away from each other in a balanced vibrating manner.

With these and other objects in view, which will become more readily apparent from the following detailed description of one practical and illustrative form of the improvements shown in the accompanying drawings, my invention comprises the novel massage device or apparatus, elements, features of construction and arrangement of parts in cooperative relationship, as more particularly indicated and defined by the hitherto appended claims.

In the drawings:

FIGURE 1 is a plan view of one form of massage device or apparatus in accordance with my invention, the cover element of the device being removed so as to disclose the interior structural details thereof.

FIGURE 2 is a vertical sectional view, taken substantially as indicated by the arrows 2—2 on FIG. 1.

FIGURE 3 is a view as seen by looking in direction of arrow 3.

FIGURES 4 and 5 are plan views of two modified forms of my invention, and

FIGURE 6 is a sectional view taken substantially as indicated by the arrows 8—8 on FIG. 5.

Referring to the drawings, in which similar reference characters designate corresponding parts, the practical and illustrative form of my invention shown comprises a housing 1, and an electromagnet 2 which is supplied with alternating or pulsating direct current through the feed wires 3. A core 4 of the electromagnet has extensions 5 and 6 on each pole. Opposite to these extensions 5 and 6 are armatures 9 and 10. Supported by a U-shaped member 7 is a part 8, the ends of which form the armatures 9 and 10. The members 9 and 10, hereinafter referred to as armatures, are reciprocatively or vibratingly responsive to the magnetic pulsations or variations created by the fluctuations of current in the coil.

The part 8 is welded to the U-shaped member 7 and the latter is fastened to the core of the electromagnet 2 by means of rivets 17 and 18. The armatures 9 and 10 carry the applicators 11 and 12. The applicators can have any desired well known shape or form adapted to serve or carry out the purpose of the massage action. For best results the usual well known rules and laws of physics are applied for the determination of the proper cooperative relationship to exist between the weight of the applicators, the armatures and the resiliency of the armature mounting means.

It is also understood that in the form of my invention disclosed by FIGS. 1 and 2, the core extensions 5 and 6 constitute a plurality of magnetic attraction areas. Likewise in FIG. 4 a plurality of magnetic attraction areas are provided, these areas being at the ends of the cores 22 and 23. Also in FIG. 5 the plurality of the magnetic attraction areas are provided at the ends of the members 24 and 25.

By the expression "reciprocable means" as used in the claims is meant the means which includes armatures 9 and 10 in FIG. 1, and in the arrangement shown in FIG. 5 includes the armatures 24 and 25.

The applicators 11 and 12 are secured to the adapters 13 and 14 which are riveted to the armatures 9 and 10. The adapters of the applicators extend through slots 15 and 16 of the housing 1 and 1*a*. The electromagnet 2 is fastened to the housing 1 by the screws 19 which are anchored in extensions 20 of the housing.

When alternating or pulsating direct current is supplied to the coil of the electromagnet 2, the armatures 9 and 10 which carry the applicators 11 and 12, vibrate synchronously with the frequency of the alternating or pulsating direct current, thereby moving toward and away from each other in a balanced vibrating manner. Since the path of movement followed by the applicators is arcuate, a composite movement results: the one component is the motion of the applicators toward and away from each other, the other component is a small movement in lateral relation with said first motion.

The size of the massage device is preferably such that the user thereof can hold the same in his hand and apply it to the area to be treated with the applicators. However it is to be understood that the device can be made in larger sizes and can be used in any other manner.

It is also to be understood that other forms of magnets and armatures can be utilized to accomplish the same results and that the invention is not limited in this respect. For example, an arrangement can be provided as illustrated by:

FIGURE 4 shows a modified form of my messsage device or apparatus which embodies electromagnets having E-shaped cores 22 and 23.

FIGURE 5 illustrates another modified form of my invention wherein the torsion bar principle is employed for the armatures 24 and 25. In this arrangement, the

torque bars 26 and 27 are supported by the members 28 and 29 which are secured to the core 30.

It will be apparent to those skilled in this art that the novel improvements specifically shown and described can be changed and modified in various ways without departing from the invention herein disclosed, the scope of which is more particularly indicated and defined by the hereto annexed claims.

I claim:

1. A massaging device of the character described comprising electromagnetic impulse generating means which includes a plurality of magnetic attraction areas on each of two sides thereof reciprocable means including at least one identical pair of armatures each of which is mounted so as to be movable in a certain work performing direction only, a massage element joined with each of said armatures so that each massage element is moved in said certain work performing direction only, and means for maintaining said armatures in such spaced positional relationship with the electromagnetic impulse generating means that the magnetic impulses generated by the latter will cause the armatures to move toward and away from each other to their maximum vibrating extent in said certain work performing direction only and in a balanced vibrating manner.

2. A massaging device in accordance with claim 1, wherein said reciprocable means is in the form of two resilient members each of which is responsive to the electromagnetic impulse generating means.

3. A massaging device in accordance with claim 1, wherein said maintaining means is in the form of at least one torsion bar.

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